

ABSTRACT

A method for forming a metal-oxide semiconductor field-effect transistor (MOSFET) includes patterning a fin area, a source region, and a drain region on a substrate, forming a fin in the fin area, and forming a mask in the fin area. The method further includes etching the mask to expose a channel area of the MOSFET, etching the fin to thin a width of the fin in the channel area, forming a gate over the fin, and forming contacts to the gate, the source region, and the drain region.